

REMARKS

The claims now pending in the application are Claims 1, 3, 5 to 7, 9, 11 and 12, the independent claims being Claims 1 and 7. Claims 2, 4, 8 and 10 have been cancelled herein. Claims 1, 3, 5 to 7, 9, 11 and 12 have been amended herein.

In the Official Action dated June 16, 2003, Claims 1 to 12 were rejected under 35 U.S.C. § 102(b), as anticipated by U.S. Patent No. 6,474,880 (Toyoda). Reconsideration and withdrawal of the rejection respectfully are requested in view of the above amendments and the following remarks.

The rejection of the claims over the cited art respectfully is traversed. Nevertheless, without conceding the propriety of the rejection, Claims 2, 4, 8 and 10 have been cancelled and Claims 1, 3, 5 to 7, 9, 11 and 12 have been amended herein more clearly to recite various novel features of the present invention, with particular attention to the Examiner's comments. In particular, Claims 1, 3, 7 and 9 have been amended to recite the features of prior pending claims 2, 4, 8 and 10, respectively. Thus, support for the proposed amendments may be found in the original application. No new matter has been added.

The present invention relates to a novel shutter apparatus comprising a shutter base plate having a shutter aperture, a first arm member which rotates around a center of rotation at a first axis, relative to the shutter base plate, a second arm member which rotates around a center of rotation at a second axis, relative to the shutter base plate, and a plurality of shutter blades, each of the shutter blades being coupled to the first and second arm members, whereby rotation of the first and second arm members around their respective axes causes the plurality of shutter blades to run over the shutter aperture. Each shutter blade has a main blade body portion extending in a direction perpendicular to the running direction thereof.

In one aspect, as now recited in independent Claim 1, a first shutter blade with a smallest running travel (e.g., blade 5 in Figure 5) comprises a light shielding portion (5a) projecting in the running direction on the coupling portion side to the first and second arm members and arranged to effect light shielding of the shutter aperture, wherein the following condition is satisfied: $L1 > W1$, where $W1$ is a length, in the running direction, of the blade main body portion of the first shutter blade, and $L1$ is a projection length of the light guiding portion from the blade main body portion.

In another aspect, as now recited in independent Claim 7, a first shutter blade with a second smallest running travel (e.g., blade 4 in Figure 5) comprises a light shielding portion (4a) projecting in the running direction on the coupling portion side to the first and second arm members and arranged to effect light shielding of the shutter aperture, wherein the following condition is satisfied: $L2 > W2$, where $W2$ is a length, in the running direction, of the blade main body portion of the first shutter blade, and $L2$ is a projection length of the light shielding portion from the blade main body portion.

Applicant submits that the prior art fails to anticipate the present invention. Moreover, Applicant submits that there are differences between the subject matter sought to be patented and the prior art, such that the subject matter taken as a whole would not have been obvious to one of ordinary skill in the art at the time the invention was made.

The Toyoda '880 patent relates to a shutter device, and discloses a shutter device comprising a shutter base plate having a shutter aperture, first and second shutter blade members that rotate about respective first and second axes relative to the shutter base plate, and a plurality of shutter blades, where each of the plurality of shutter blades is coupled to the first and second arm members, whereby rotation of the first and second arm members around their respective axes causes the plurality of shutter blades to run over the shutter aperture. However, Applicant submits that the Toyoda '880 patent fails to disclose or suggest at least the above-described features of the present invention. Referring to

Figure 40 of the Toyota '880 patent and Figure 5 of the present application, Applicant submits that the Toyota '880 patent fails to disclose or suggest at least the recited features/conditions $L1 > W1$ and $L2 > W2$, as disclosed and claimed in the present application. In fact, Applicant submits that inspection of the structures illustrated in Figure 40 of the Toyota '880 patent yields for the first blade (blade 516) the relation $L1$ (18.5mm) $< W1$ (21.5mm), and for the second blade (blade 515) the relationship $L2$ (12.5mm) $< W2$ (21.5mm). Nowhere does the Toyota '880 patent disclose or suggest that this relation/condition be modified/reversed, as taught in the present application.

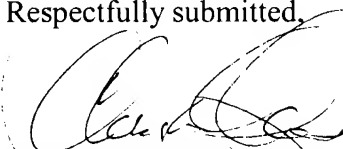
For the above reasons, Applicant submits that independent Claims 1 and 7 are allowable over the cited art.

Claims 3, 5, 6, 9, 11 and 12 depend from Claims 1 and 7, respectively, and are believed allowable for the same reasons. Moreover, each of these dependent claims recites additional features in combination with the features of its respective base claim, and is believed allowable in its own right. Individual consideration of the dependent claims respectfully is requested.

Applicant believes that the present Amendment is responsive to each of the points raised by the Examiner in the Official Action, and submits that the application is in allowable form. Favorable consideration of the claims and passage to issue of the present application at the Examiner's earliest convenience earnestly are solicited.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,



Attorney for Applicant

Registration No. 32,078

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-3801
Facsimile: (212) 218-2200
CPW/gmc

IX _MAIN 143580v1